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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,214	03/12/2004	Ravinder Patnam Krishnaswamy	G&C 30566.315-US-01	7441

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EXAMINER

NGUYEN, PHILLIP H

ART UNIT	PAPER NUMBER
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2191

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/799,214	Applicant(s) KRISHNASWAMY ET AL.	
	Examiner Phillip H. Nguyen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed November 27, 2006. Claims 1-18 remain pending.

Claim Objections

2. Examiner misunderstood the claims dependency and therefore the claim objections are withdrawn.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 7, and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The languages of claims 1, 7, and 13 raise a question as to whether the claims are directed to an abstract idea that is not tied to a technological art, environment or machine which would accomplished a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. For instance, "packaging the context data supplied by the notified callbacks of the modules and sub-application" is an abstract

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idea because the outcome is not realized as a monitoring, controlling or any other tangible output that would provide a utility. Therefore, the claims are non-statutory. Claims 2-6, 8-12, and 14-18 depend on claim 1, 7, and 13^{and do not cure the deficiency of claim 1} respectively, and therefore, have been addressed in connection with the rejection set forth to claims 1, 7, and 13 above.

6. Claims 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims are directed to "an article of manufacture" which is disclosed as a carrier. The specification provides intrinsic evidence that the article of manufacture is intended to cover signals (see paragraph 0020). Such are currently not believed to enable the article of manufacture to act as a computer hardware component and realize its functionality absent being claimed in combination with the necessary hardware to received and convert the signals to logic/computer usable code.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (United States Patent No.: 5,948,113), in view of Glerum et al. (United States Patent No.: US 6,785,848 B1).

As per claim 1:

Johnson discloses a method for providing contextual diagnose data at a point of failure of a software program, comprising:

- registering callbacks for one or more modules and sub-applications within the program ("**registers allocated objects on the thread's central object stack 220**" Col 9, line 29);
- examining a call stack for the program upon failure of the program ("**the exception handling code 210 within the GOM 200 pops off objects 225a-c on the central object stack 220 added or registered since the stored location or address**" Col 9, line 36-38);
- notifying the registered callbacks for the modules and sub-applications based on the examined call stack ("**the objects popped off the central object stack 220 are deemed to be unregistered from the central object stack 220**" Col 9, line 39-41, **unregistered the objects from the stack means notifying the registered objects they have been unregistered**).

Johnson does not explicitly disclose:

- performing callback processing, wherein the notified callback of the modules;
and

- packaging the context data supplied by the notified callback for the modules and sub-application.

However, Glerum discloses an analogous method for providing diagnose data at a point of failure of a software program (**"the data sent to the repository may be used by developers to diagnose the failure and if possible, develop a fix for the failure"** Col 8, line 65-67), comprising:

- performing callback processing, wherein the notified callback of the modules and sub-applications extract and supply context data (**"if the executable program 210 has registered exception filter 220 with the operating system, then the exception filter 220 is executed (called) when executable program 210 encounters an exception"** Col 5, line 53-56, **exception filter 220 can be a module or sub-application within the executable program 210**); and
- packaging the context data supplied by the notified callbacks of the modules and sub-applications (**"exception filter 220 executes a failure reporting executable 230"** Col 5, line 57-58; **"the failure executable 230 determines what relevant information to retrieve from the application program module ...sent to the repository as a bucket. A bucket is a set of information uniquely defining the location of the failure"** Col 6, line 32-41, **packaging is to combine or group data and bucketing is also a similar process**).

Therefore, it would have obvious to one having an ordinary skill in the art at the time the invention was made to modify Johnson's approach to have the registered objects, such as modules, applications, sub-applications etc., to extract and supply data and packaging the context data. One of ordinary skill in the art would have been motivated to modify Johnson's approach so that it is possible for the vendor to send the fix to the user in response to a bucket being sent and received ("**After a set up failure is fixed, it is possible to send the fix to the user in response to a bucket received**" Col 11, line 12-13).

Note: The claim recites the phrase "for" in the preamble and the body of the claim, which indicates intended use and as such does not carry patentable weight. The limitations following the phrase "for" describe only intended use but not necessarily required functionality of the claim.

As per claim 2:

Johnson and Glerum disclose the method as in claim 1 above; and Johnson further discloses:

- wherein the registering step comprising registering callbacks for the modules and sub-applications when an address of a procedure or function within the modules and sub-applications is on the call-stack upon the failure of the program ("**the exception handling code 210 within the GOM 200 pops off objects 225a-c on the central object stack 220 added or registered since the stored location or address**" Col 9, line 36-38).

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As per claim 3:

Johnson and Glerum disclose the method as in claim 1 above; and Glerum further discloses:

- wherein the context data is comprised of stack data, heap data, global data or external data ("**global data**" Col 8, line 51).

As per claim 4:

Johnson and Glerum disclose the method as in claim 1 above; and Glerum further discloses:

- wherein the packaging step comprises storing the packaged context data ("**A bucket is a set of information...**" Col 6, line 40, **this means, information are stored/combined/grouped as a bucket**).

As per claim 5:

Johnson and Glerum disclose the method as in claim 1 above; and Glerum further discloses:

- wherein the packaging step comprises transferring the packaged context data to a server computer ("**the failure is sent to the repository as a bucket**" Col 6, line 39).

As per claim 6:

Johnson and Glerum disclose the method as in claim 5 above; and Glerum further discloses:

- wherein the packaging step comprises storing the transferred, packaged context data on the server computer ("**the failure is sent to repository as a bucket**" Col 6, line 39; "**corporate file server repository may be used to store the failure encountered by users**" Col 2, line 59-60).

As per claim 7:

Johnson discloses an apparatus for providing context diagnose data at a point of failure of a software program, comprising:

- a computer ("**personal computer 20**" Col 7, line 14); and
- logic, performed by the computer ("**a number of program modules may be stored in the drives and RAM 25...**" Col 7, line 41-49), for:
 - o registering callbacks for one or more modules and sub-applications within the program ("**registers allocated objects on the thread's central object stack 220**" Col 9, line 29);
 - o examining a call stack for the program upon failure of the program ("**the exception handling code 210 within the GOM 200 pops off objects 225a-c on the central object stack 220 added or registered since the stored location or address**" Col 9, line 36-38);

- notifying the registered callbacks for the modules and sub-applications based on the examined call stack (**"the objects popped off the central object stack 220 are deemed to be unregistered from the central object stack 220"** Col 9, line 39-41, **unregistered the objects from the stack means notifying the registered objects they have been unregistered**).

Johnson does not explicitly disclose:

- performing callback processing, wherein the notified callback of the modules; and
- packaging the context data supplied by the notified callback for the modules and sub-application.

However, Glerum discloses an analogous method for providing diagnose data at a point of failure of a software program (**"the data sent to the repository may be used by developers to diagnose the failure and if possible, develop a fix for the failure"** Col 8, line 65-67), comprising:

- performing callback processing, wherein the notified callback of the modules and sub-applications extract and supply context data (**"if the executable program 210 has registered exception filter 220 with the operating system, then the exception filter 220 is executed (called) when executable program 210 encounters an exception"** Col 5, line 53-56, **exception filter 220 can be a module or sub-application within the executable program 210**); and

- packaging the context data supplied by the notified callbacks of the modules and sub-applications ("**exception filter 220 executes a failure reporting executable 230**" Col 5, line 57-58; "**the failure executable 230 determines what relevant information to retrieve from the application program module ...sent to the repository as a bucket. A bucket is a set of information uniquely defining the location of the failure**" Col 6, line 32-41, **packaging is to combine or group data and bucketing is also the same process**).

Therefore, it would have obvious to one having an ordinary skill in the art at the time the invention was made to modify Johnson's approach to have the registered objects, such as modules, applications, sub-applications etc., to extract and supply data and packaging the context data. One of ordinary skill in the art would have been motivated to modify Johnson's approach so that it is possible for the vendor to send the fix to the user in response to a bucket being sent and received ("**After a set up failure is fixed, it is possible to send the fix to the user in response to a bucket received**" Col 11, line 12-13).

Note: The claim recites the phrase "for" in the preamble and the body of the claim, which indicates intended use and as such does not carry patentable weight. The limitations following the phrase "for" describe only intended use but not necessarily required functionality of the claim.

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As per claims 8-12:

Recite the same limitations as recited in claim 2-6, respectively, and therefore, have been addressed in connection with the rejection set forth to claims 2-6 respectively.

As per claims 13-18:

Recite the same limitations as recited in claims 1-6, respectively, and therefore, have been addressed in connection with the rejection set forth to claim 1-6 respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN
02/01/2007



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SUPERVISORY PATENT EXAMINER